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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,195	07/29/2003	Kuen-Yuan Hwang	LA-7403-103	9240

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FULBRIGHT AND JAWORSKI L L P
PATENT DOCKETING 29TH FLOOR
865 SOUTH FIGUEROA STREET
LOS ANGELES, CA 900172576

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,195

Applicant(s)

HWANG ET AL.

Examiner

Chukwuma O. Nwaonicha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-28 are pending in the application.

Election/Restrictions

Applicants' election, filed on 6/18/04 with traverse of Group 1 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Groups II, claims 18-28, remains restricted and have been withdrawn from further consideration pursuant to 37 CFR 1.142(B), as being drawn to a non-election Group. Applicants' are reminded of their right to file divisional applications to the non-elected claims.

Applicants' are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Abstract

The abstract is objected to because of the word "each symbol". The word "each symbol" should be changed to "each group", "each substituent" or "each term".

Claim Objections

Claim 1 is objected to because applicants did not define the term "a" in the general formula I. Correction is required.

Claim 9 is objected to because of the use of double periods (...). Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is rejected for being incomplete because it depends from itself.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

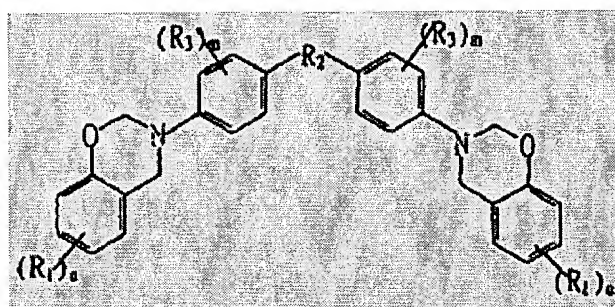
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schreiber et al., {U.S. Pat. 5,443,911} in view of Hayakawa et al., {High Perform. Polym. 12 (2000) 237-246}.

Applicants claim an azaoxa heterocyclic compound that is used as a hardener for epoxy resin composition. The general formula of the azaoxa heterocyclic compound is shown below (figure I):



I

wherein, R₁ is alkyl group, an alkenyl group, an alkoxy group, a hydroxy group, halogen and an amino group; R₂ is an alkylene group, O, S or SO₂; R₃ is H or C₁-C₆ alkyl group; m is an integer of 0 to 4; and "n" is an integer of 1 to 4.

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Schreiber et al. teach an azaoxa compound used in epoxy resin system shown below (figure II).



II

The difference between applicants claim compound and that of Schreiber et al. is that applicants teach a *t*-butyl substituted azaoxa compound while Schreiber et al. disclose azaoxa compound that is unsubstituted. Additionally, Schreiber et al. teach generalized substituted azaoxa compounds without specifically teaching *t*-butyl substituted one.

However, Hayakawa et al. disclose methyl-substituted azaoxa heterocyclic compound (see page 244-245). The different between applicants claim compound and that of Hayakawa et al. is that applicants' compound is *t*-butyl-substituted azaoxa heterocyclic compound while Hayakawa et al. is methyl-substituted on the 6,8-position of the phenyl ring).

It would have been *prima facie* obvious to one skilled in the art, in view of Schreiber et al., Hayakawa et al. and applicants' admission of prior art teachings about azaoxa compounds (see page 3, line 5 of the specification) to make and use substituted azaoxa heterocyclic compounds with optimum success in epoxy resin system.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention since Schreiber et al. disclose that substituted azaoxa compounds with excellent chemical and physical properties can be used in epoxy resin

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systems. Said person would have been motivated to practice the teaching of the reference cited because it demonstrates that substituted azaoxa compound are useful in epoxy system. The instant claimed invention would therefore have been obvious to one of ordinary skill in the art.

Claim Rejections - 35 USC § 102

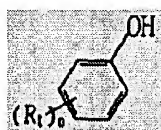
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

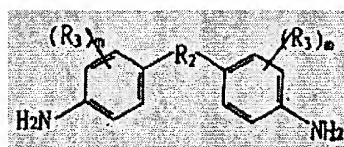
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-11 and 13-17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schreiber et al. {U.S. Pat. 5,443,911}.

Applicants claim an azaoxa heterocyclic compound, a derivative of a substituted phenol of general formula II and dianilinomethane of general formula III, wherein R_1 , R_2 , R_3 , m and n are defined in the claims, The compound is used in epoxy resin systems.



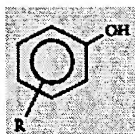
II



III

Schreiber et al. disclose azaoxa heterocyclic compounds for epoxy resin systems made from substituted phenols of general formula IV and dianilinomethane of general formula III.

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IV

wherein R is an alkyl, halogen, alkoxyl, (see U.S. Pat. 5,443,911, page 2, line 65, and page 8, line 27).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

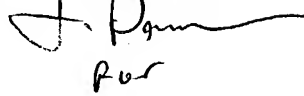
Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner

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J. PARSA
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'J. Parsa', with a stylized flourish extending to the right.

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Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner,
Technology Center 1600